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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,684	03/11/2005	Guillaume De Dinechin	266817US6PCT	7311
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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
			EXAMINER KERNS, KEVIN P	
			ART UNIT 1725	PAPER NUMBER
			NOTIFICATION DATE 06/25/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/527,684	<b>Applicant(s)</b> DE DINECHIN ET AL.	
	<b>Examiner</b> Kevin P. Kerns	<b>Art Unit</b> 1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 12-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

1. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

In this instance, the specification lacks section headings.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 12-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 15, the phrase "or the like" (in this instance, the term "type") renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like", or "type"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d). The limitations "YAG or CO<sub>2</sub> type source" and "MIG or MAG type" include this indefinite term. Furthermore, MPEP 2173.05(b), under heading E. "Type" (MPEP page 2100-216 of August 2006, Revision 5) states "*The addition of the word "type" to an otherwise definite expression...extends the scope of the expression so as to render it indefinite*". *Ex parte Copenhagen*, 109 USPQ 188 (Bd. App. 1955). In this instance, it is suggested to delete the term "type".

Claim 16 recites the limitation "the transverse direction" in the 4<sup>th</sup> line. There is insufficient antecedent basis for this limitation in the claim. In this instance, it is suggested to replace "the" with "a" to obtain proper antecedent basis.

Claim 16 recites the limitation "the molten bath" in the 2<sup>nd</sup> line from the end of the claim. There is insufficient antecedent basis for this limitation in the claim. In this instance, it is suggested to replace "bath" with "pool" to obtain proper antecedent basis.

Claim 18 recites the limitation "the chamfer" in the 6<sup>th</sup> line. There is insufficient antecedent basis for this limitation in the claim. In this instance, it is suggested to replace "the" with "a" to obtain proper antecedent basis.

Claim 18 recites the limitation "the longitudinal direction" in the 4<sup>th</sup> line from the end of the claim. There is insufficient antecedent basis for this limitation in the claim. In this instance, it is suggested to replace "the" with "a" to obtain proper antecedent basis.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 12-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minamida et al. (US 6,770,840) in view of Walduck (US 5,866,870).

Minamida et al. teach an installation and method for laser welding in a chamfered joint (e.g. via butt welding of steel materials), such that the installation and method

comprise providing a laser (e.g. a CO<sub>2</sub> laser – column 11, line 35) that directs a focused laser beam LB; providing a filler metal wire W via a filler wire guide 35 (column 11, lines 59-61); providing a head (laser welding nozzle 11) configured to penetrate into the chamfer and having multiple drillings (openings) passing through the head and converging toward each other (Figure 10), such that one drilling is aligned along a longitudinal axis with the laser beam LB, and other drillings include gas pipes in the form of two gas ejection pipes (21,27) that provide protective gas flows G<sub>c</sub> and G<sub>s</sub>, respectively, to blow through the gas ejection pipes (21,27) and through the head 11 that has a central recess; and means for adjusting the position of the head (Figure 17) along a welding direction via welding head advancing means (abstract; column 11, lines 30-67; column 12, lines 1-23; column 14, lines 64-67; column 15, lines 1-23; and Figures 10 and 17). Minamida et al. do not specifically disclose control means for lowering the head that has a perforated plate at its end, as well as one of the drillings containing the wire guide electrode.

However, Walduck discloses a method and apparatus for enhanced laser beam welding, in which the method and apparatus include providing a laser that directs a focused laser beam 18; providing a filler metal wire via a filler wire guide 50; providing a welding head 10 (with housing 14 that includes further structures in the form of chamber 30 with diffuser mesh 34 and plasma torch nozzle 28 on a distal end of the housing 14) having multiple drillings (openings) passing through the welding head 10, such that one of the drillings (in chamber 30 containing inert gas passing through a diffuser mesh 34, or perforated plate) also contains the wire guide 50; and means for adjusting the

position of the head relative to a surface 12 of a workpiece to be welded (advancing and lowering the head) in the form of drive means 23, such that these additional features are advantageous for obtaining accurate positioning of the welding head with respect to the workpiece while providing steady feeding of filler wire and diffused inert gas (abstract; column 3, lines 16-31 and 64-67; column 4, lines 1-30; column 7, lines 33-55; and Figure 1).

It would have been obvious to one of ordinary skill in the art at the time the applicants' invention was made to modify the installation and method for laser welding in a chamfered joint, as disclosed by Minamida et al., by using the control means for lowering the head that has a perforated plate at its end, as well as one of the drillings containing the wire guide electrode, as taught by Walduck, in order to obtain accurate positioning of the welding head with respect to the workpiece while providing steady feeding of filler wire and diffused inert gas (Walduck; abstract; column 3, lines 16-31; and column 4, lines 18-30).

### ***Response to Arguments***

7. The examiner acknowledges the applicants' amendment received by the USPTO on February 7, 2007. Upon further review, new specification objections and 35 USC 112, 2<sup>nd</sup> paragraph rejections are presented in above sections 1-3. The applicants have cancelled claim 11. Claims 12-18 are currently under consideration in the application.

8. It is noted that allowable subject matter was previously indicated for all claims of record that are currently under consideration. However, upon further consideration, new grounds of rejection are made in view of the new 35 USC 103(a) rejections set forth in above section 6. As a result, all of the applicants' arguments set forth in the previous office actions (as applicable) with respect to claims 12-18 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 7,019,256 is also cited in PTO-892.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kevin P. Kerns whose telephone number is (571) 272-1178. The examiner can normally be reached on Monday-Friday from 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jonathan Johnson can be reached on (571) 272-1177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 1725

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kevin P. Kerns *Kevin Kerns 6/13/07*  
Primary Examiner  
Art Unit 1725

*KPK*  
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June 13, 2007